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ABSTRACT

Government regulations state that broadcasters are obligated to allot program time to matters of public interest, but neither law nor precedent have determined their commitment to present messages on social problems. To determine the amount of public service advertising (PSA) that is broadcast, particularly anti-drug appeals, a content analysis was conducted in Connecticut covering nine television channels during a one-week period. Information was obtained from station logs and observations by selected viewers on use of celebrities, explicit audience direction, fear appeal, message topic, and type of show during which the commercials appeared. Results support hypotheses that: (1) more PSA messages are broadcast during periods of lower audiences than in prime time; (2) more air time per PSA is alloted during non-prime time periods; (3) there is a significant relationship between program content and PSA topic; and (4) more PSA's cover general topics than social problems. However, results do not support hypotheses that more PSA's are broadcast between shows than during shows or that there is a relationship between the intended PSA audience and program content. (RN)

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AN ANALYSIS OF TELEVISED PUBLIC SERVICE ADVERTISING

by
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DRUG ABUSE INFORMATION RESEARCH PROJECT

DAIR Report #9

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This report is one of a series of descriptive and predictive studies into the cognitive, affective and behavioral responses to drug abuse information. Project DAIR (Drug Abuse Information Research), proposes to define dimensions of information seeking and utilization that relate to drug abuse. Investigations in this series develop and implement the instrumentation for a methodology which includes surveys, experimental manipulations, field experiments and modeling. One goal of the series is the development of a stochastic behavioral model which allows the prediction of drug use behavior consequent to specified exposure from drug abuse information.

Computer time for statistical analyses was provided through the Facilities of the University of Connecticut Computer Center and supported by National Science Foundation Grant GJ-9 to the Computer Center.

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As licensees of the government, broadcasters are generally obligated to perform "in the public interest." A definition of that obligation is available to broadcasters through the explication of such phrases as "local service," "public service time," "number of commercial minutes," and "news and public affairs programming" on license renewals and applications.

As licensees of publicly-owned radio-television frequencies, the public service obligation of broadcasters may take on added dimensions during emergencies such as natural disasters. The shape of such dimensions is well-documented in professional broadcasting journals (e.g. Broadcasting) and, less frequently, in the popular press.

Yet, it can be argued that certain phenomena in our society constitute social emergencies: for example, the spread of communicable diseases such as venereal disease; alcoholism; drug abuse; civil unrest; discrimination. In dealing with those matters however, the extent of a broadcaster's public service commitment is left undefined, either by precedence or by law.

This study examines patterns of public service advertising (PSA) with particular attention to "social problem" PSA's such as anti-drug abuse appeals. It is a follow-up to an earlier analysis of drug abuse public service advertising by Hanneman and McEwen (in press). This article also explores the role of public service advertising during times of social crises, again with particular attention to drug abuse.

The research literature concerning public service advertising is nonexistent. This lack perhaps reflects the deemphasized importance of this communications area for both broadcasters and researchers. However, recent license renewal challenges based on the public service performance of licensees suggests an underestimation by broadcasters of the public's expectation of what constitutes "public service commitment."

An earlier content analysis of televised drug appeals by Hanneman and McEwen

(in press) took place during the last two weeks of December, 1971. All major Connecticut, Massachusettes and Rhode Island television stations were observed daily from sign-on to sign-off.

During the sampling period, 85 presentations of 32 different drug abuse messages were coded. Major results were as follows:

-over 90% of the drug abuse commercials observed were broadcast during times of typically lower attendance (i.e. other than prime time);

-87% of the drug abuse PSA's presented only general information (that is, no specific data, evidence or statistics were presented);

-42% of all PSA's referred to the harmful social and/or physical consequences of drug abuse;

-approximately 18% of the messages were directed to youth;

-67% of the messages involved appeals by celebrities.

From that exploratory study, a number of generalizations may be made. For instance, the predominant presentation of drug abuse PSA's during times of lowest audience attendance suggests an inverse relationship between cost of commercial time and number of PSA's on the air.

Further, most appeals contained nonspecific information (that is, content of little or no instrumental value), directed to apparently undefined, heterogeneous audiences. These appeals were generally made by celebrities, and over two fifths involved some form of fear appeal. Yet, there apparently exist no data linking the celebrities involved (e.g., Hal Holbrook, various football players) with qualification[1] to discuss drug abuse. Additionally, there are no data to suggest that all intended audience segments would perceive the credibility level of such a source similarly.

The 1971 data indicates that in the case of televised drug abuse appeals, a one-shot dissemination approach appeared to have been utilized. Such a discounted model of mass media effects implicitly assumes that individuals obtain their information directly from the media and that mere exposure, or repeated exposure, is equivalent to impact (Cf. Troldahl, 1966; Rogers, 1971).

A fuller discussion of the dimensions and information-seeking determinants of drug abuse communications is provided by Hanneman (1972).

METHODOLOGY

The content analysis covered the week of June 24-30, 1972. All television stations available in the Hartford, Connecticut metropolitan viewing area were included. Thus, a total of 9 channels were observed, incorporating most of the major television stations in Hartford, Boston and Providence. Two sets of content analytic data were obtained.

The first set of data was coded from television broadcasters' logs for the sampling period. These data were primarily obtained to provide indices of presentation factors: total PSA and broadcast time; day and time of presentation;; preceding and following messages or shows; and program types. Since the observational analysis took place only during sampled time periods, it was felt the log data would be a more accurate and reliable source of information about presentational differences among PSA's. Unfortunately, only four stations' logs were made available, somewhat restricting the generalizability of the data.[2] Nevertheless, the four stations represent the range of television stations in most markets: a powerful CBS outlet (the top-ranked station in the Hartford market); a regional ABC affiliate; a regional NBC affiliate; and a small UHF NBC affiliate. Except for the regional NBC station, the stations decribed comprise the major Connecticut television stations.

The second set of data was observational, gathered by 18 coders. Observation of the nine channels was performed during selected time periods from sign-on to sign-off during the analysis week. Of all possible on-the-air hours, 55% were observed and coded. The coding instrument employed was similar to that used in the earlier analysis by Hanneman and McEwen, except that variables were eliminated in the study[3] for which interjudge reliability was below 80%. The two page form included fifteen variables: date and day; time of PSA; channel;

length; network; topic; sponsor or source; identifiable celebrities; explicit audience direction (youth or parents); primary orientation (the viewer, or a significant other); physical or social consequences of the message; incorporation of statistics or data for evidence; time PSA was shown; the preceding and following content; and a complete PSA description.

Intercoder reliabilities of the messages' primary direction and the preceding and following content proved unacceptably low and these were eliminated from the analysis. However, the preceding and following content was reliably derived from the log data. Other reliabilities, based on overlapping coding of approximately 10% of the observation time, ranged upward from 75%, with lowest agreement regarding audience direction (youth, parents, or general).

CONTENT ANALYSIS PROCEDURES

This discussion is restricted to message factors only. The following message factor variables were coded from the observational data. These were considered most representative of the full range of public service appeals found in regional television.

1) Celebrities: An actor or voice-over narrator was coded as being a celebrity if the person identified himself or was known to the coder.

2) Explicit audience direction: Ads were coded as being directed toward youth if all main characters were youth and/or the narrator made an appeal to youth; PSA's were coded as being directed to parents if the narrator's appeal was not explicit, or could conceivably be directed to any age group, the PSA was coded as general.

3) Harmful or painful events: PSA's were coded as employing a fear appeal if the PSA showed or discussed the harmful (or painful) social or physical consequences of not doing what the messages directed.

4) Statistics or data: These were coded as being utilized in the appeal if specific numbers, statistics, or other research evidence was shown or cited.

5) Topic of PSA[4]: Topic categories were established by noting every topic theme addressed on a master list. Based on this 100% sample, the following categories were constructed:
   a) Social Problems: For this category, major societal problems judged to be of a current nature were included; alcoholism, discrimination (any type), civil liberties, pollution and conservation, venereal disease, population growth problems.

b) "Drug Abuse:" Although considered part of the social problem category, this was coded separately for seperate analyses.

c) "Disease Detection:" Messages about arthritis, cancer, kidney disease, leukemia, etc., which discussed a disease and might solicit help or funds.

d) "Personal Health:" Messages about dental care, heart ailments, physical fitness, eye care, prenatal care, poisons, etc. No solicitation requests included.

e) "General Solicitation:" These were nonmedia solicitations for CARE, Foster Parents, Orphanages, Red Cross USO, Olympic Committee, Project Hope, United Negro College Fund, etc.

f) "Emergency Solicitation:" Bangladesh Emergency fund, the Red Cross Flood Victims Drive.

g) "Jobs and Education:" These were information messages regarding careers for women, hiring teenagers for the summer, stay in school messages, veterans' employment rights, college credit for job experience, etc. These messages were sponsored by local and state agencies.

h) "Parks and forests:" Discover America Travel campaign appeals, fire prevention, national parks information, anti-litter campaigns, etc.

i) "Youth Organizations:" Messages about the Boy Scouts, Girl Scouts, boys and girls clubs, 4H clubs, etc.

j) "Auto/Boat/Home Safety:" Boating procedures, power tool safety, safe driving, seat belts, water safety, house safety, etc.

k) "Government Information:" Government sponsored appeals regarding benefits for the aged, voting registration, social security, income tax forms, US Savings Bonds, etc.

l) "Crime Prevention:" Preventing car theft, preventing house burglery, interstate land sales, illegal practices of used car dealers, unsolicited mail.

m) "Government Volunteers:" Recruiting spots for the Peace Corps, Army, Air Force, Navy, Marine Corps, etc.

n) "Community Organizations:" Information about hotlines, museums, Children's Zoo, neighborhood centers, drive to build a New Hartford stage, Connecticut Revitalization Corps, etc.

o) "Religion:" Messages about ministers, God's image, pacifism, self-reflection.

6) Program (during which PSA was shown): Twelve categories were established based on a master list of all shows represented:

a) "Children shows" included cartoons, Mr. Wizard, etc.
b) "News and Specials" included newscasts and documentaries and related specials
c) "Movies"
d) "Soap Operas"
e) "Game and Quiz Shows"
f) "Drama Series" included shows like Hawaii Five-O, Cannon, etc.
g) "Comedy Series" included I Love Lucy, etc.
h) "Sports" included all sports shows
i) "Talk Shows" included Merv Griffin, Dick Cavett, etc.
j) "Other" included religious programming, community activities, "Galloping Gourmet," and one variety — "Sonny and Cher."

HYPOTHESES

Based on the preliminary study discussed, the following predictions were proposed. Since earlier data reported indicated drug abuse appeals were broadcast primarily during times of lower audience attendance (Class B through D) it is expected that:

H1. More PSA's (overall) will be broadcast during class B, C, and D times than during class AA or A time periods; and,

H2. There will be more time devoted to PSA's during the Class B, C, D periods.

The following predictions should follow from the preceding hypotheses. Since general-topic PSA are assumed to be more "neutral," and hence relatively more palatable to programmers than social-problem PSA's (i.e., veneral disease, drug abuse, discrimination, pollution, alcoholism, population growth, civil liberties), and hence there may be hesitancy to associate specific programs with the latter it is expected that,

H3. A greater proportion of social problem PSA's and PSA time will be found between programs than during programs;

Of those broadcasting during programs however,

H4. There will be a significant relationship between direction of the PSA topic and program content; also, specifically,

H5. There will be a relationship between direction of the PSA topic and program content such that more youth-oriented PSA time will be broadcast during children's programming than during other programs.

Finally, in terms of PSA categories,

H6. More public service time will be devoted to general topics than to specific social problems.

FINDINGS

In the following discussion, data from the log and observational analyses will be referred to separately unless otherwise indicated. A total of 1159 PSA's were coded from the television logs of the four channels; this compares to the observation (during sampled times) of 844 PSA's. The log data will generally be relied upon for the analysis of presentation factors whereas the observed data will be utilized in the discussion of message factors. However, analyses revealed no significant differences between the two data sets for the presentation variables or topic distributions.

The 1159 PSA's represent 747 minutes or 12.45 hours of public service advertising. This compares to 530 hours of total on-the-air time for the four stations. Although precise commercial time was not available, a conservative estimate from the observational data suggests an average of about 13 minutes of commercial time per television hour. Across the entire 530 air hours, subtracting time devoted to PSA's, approximately 112 hours were devoted to commercials.

In percentage terms, PSA's accounted for a mere 2% of total viewing time, yet commercial advertising accounted for 20% of total air time. This suggests that, on the average, a little more than one of every five air minutes is a commercial, but only one of forty three minutes is a PSA, a ratio of about 1 to 9.

TABLE 1 ABOUT HERE

Presentation factors. Table 1 shows that PSA presentations differed significantly by day ($p < .01$). It indicates that more PSA's were presented during the weekdays, Monday to Friday, than on Saturday and Sunday. Note also the significant difference ($p < .01$) in PSA time during the week.

TABLE 2 ABOUT HERE

Table 2 shows that 68% of the PSA'a were broadcast during 7 AM and 6 PM, with the largest proportion being broadcast during the 9 AM to 4:30 PM slot. These figures correspond to the observational data for all nine channels. Note that the differences in presentation proportions, and time share proportions across the various time periods are statistically significant ($p < .001$). Further analyses using the Z test for proportions, comparing Class AA and A totals against the combined total presentation and PSA minutes of the other classes yields significant ($p < .001$) support for both hypotheses 1 and 2.

In terms of length, most PSA's coded from the log data were 60 seconds long (42%) and 30 seconds (35%) in length.

TABLE 3 ABOUT HERE

Of all the PSA's viewed, 54% were presented during a program, while only 46% were shown between programs. For those PSA's shown during a program, Table 3 lists the PSA share and time share for various program types. The data indicate a significant difference ($p < .001$) in PSA distribution and time share among the show categories such that most PSA time was presented during children's shows, news and specials, and talk shows. The least amount of PSA time was found telecast during sports shows, ignoring the various miscellaneous categories. Note the time shares, as in previous tables, correspond to PSA shares. The notable exception is PSA time share during children's programming (30%) which

differs markedly from PSA topic share.

TABLE 4 ABOUT HERE

Message Factors. Table 4 depicts the relative share of each PSA category as broadcast to a tri-state area. There was a significant difference ($p < .001$) in the number of PSA's presented for each topic group. It should be noted that these topic group data are derived from the observational analysis, from sentence descriptions provided by coders. The extremely terse log notations related to PSA topic were found to be unreliable or uninterpretable.

The largest single category of PSA's appears to be the social problems category alone (13%), or overall, if drug abuse PSA's (5%) are also included. Other categories having large topic shares include general (national) solicitations (e.g., Red Cross) with 11%, and informational PSA's about jobs and educational opportunities, 11%. However, as is noted in Table 4, if the solicitation subcategories and the medical subcategories are collapsed, they each account for 15% of the total PSA share.

The largest single category concerns solicitation. This is because most of the disease detection PSA's (for example, those produced by the American Cancer Society) not only provide information about disease symptom recognition but then usually conclude with an appeal for money (e.g., "Fight cancer with a checkup and a check."). Additionally, many of the community organizations messages include appeals for funds (e.g., "Help Hartford build a new stage by sending your contributions to..."). Such message appeals were difficult to classify exactly; for they, like the disease detection messages, not only provide information about a local activity but solicitation of funds appear integral to the message's purpose.

PSA time share per topic is listed in Table 4. Proportions were calculated by computing the total number of seconds devoted to each category, and dividing

this amount by the grand total amount of PSA time. Note that such relative proportions seem to correspond almost exactly to the relative share of presentations listed in the adjacent column. The differences among the relative amounts of time per topic is significant ($p<.001$).

In the interpretation of Table 4 however, a word of caution is in order. Although the social problems category appears to have the largest share of both time and PSA's broadcast, the general social problems category accounts for a combination of 6 areas: alcoholism; discrimination; civil liberties; polution; venereal disease; and population growth. Thus, an average of approximately 2% of the total number of PSA's is devoted to each topic. These proportions are significantly lower than found for every other PSA category, except religious messages!

Hypothesis 2 predicted that the general public service time share would be greater than the time share for the social problems category, overall. A Z-test for the difference in proportions confirms this hypothesis ($p < .001$).

In terms of sponsoring agencies, as identified from tag lines of each PSA observed, the largest group of messages were produced by the Advertising Council (10%), the Red Cross (5%), the National Clearinghouse for Drug Abuse Information (3%), the Departments of Agriculture, Labor and Interior (2% each), Girls' Clubs, Boys' Clubs, Boy and Girl Scouts, and YMCA (each 1.8%), the American Heart Association (1.7%), and finally the HEW Social and Rehabilitation Service and the Veterans Administration (1.5% each).

Four other message variables were coded: celebrities; audience direction; fear appeal; and statistical evidence. It was found that only 15% of the PSA's utilized prestige appeals either made directly by a celebrity or narrated by someone identifiable. As for apparent audience direction, 17% of the messages were explicitly directed toward youth, 15% toward parents and 68% were general appeals. Fear appeals were used in one of four messages observed (24%). Also,

only 19% of the PSA's utilized statistical data or other research evidence in support of their assertions.

Interaction of Presentation and Message Factors. The data indicate only a weak relationship ($p \sim .09$) between day and length of PSA such that more of the longer PSA's, especially the 60 second appeals, tended to be presented on Saturday and Sunday, while the shorter and longer messages were broadcast in approximately equal proportions at other times.

As reported earlier, there was a significant difference in the proportion of PSA's and PSA time presented during the week. The data further indicate a significant ($X^2 = 59.5$; $df = 30$; $p < .002$) relationship between day of the week and time of presentation such that prime time PSA's are presented primarily on Monday, Class A PSA's on Wednesday, PSA's in the sign-off segment primarily on Sunday, with other PSA's distributed approximately equally across time periods and days.

There is also a significant relationship between length of the PSA and time period of presentation ($X^2 = 107.7$; $df = 35$; $p < .001$) such that 10 second PSA's are primarily shown during Class C time; 20 second PSA's during Class B time; 30 second PSA's during Class C time; and 60 second PSA's during Class B and C times.

In examining the relationships predicted in hypotheses 3 through 6, the following results were found. Hypothesis 3 predicted a greater proportion of PSA time devoted to social problems (collapsed) would be presented between programs (at station breaks, etc.) than during programs. This expectation was not supported; there was no significant differences in the amount of social problem PSA time presented during programs compared to between programs.

TABLE 5 ABOUT HERE

There was support for hypothesis 4 ($p < .03$) such that there was a significant relationship between program category and PSA topic. The definition of that

relationship is summarized in Table 5, in which the modal PSA categories during various programs are listed. Note that social problems PSA's were presented primarily during news and specials and during talk shows; the drug abuse PSA's were presented predominantly during children's programming and, to some extent, during talk and news shows.

Hypothesis five predicted a relationship between PSA direction and programming content such that more youth oriented PSA's would be found during youth programs than at other times. Overall this hypothesis was not supported; there was no relationship between the direction of the PSA and the program content. There was one exception, however. For PSA's dealing with youth organizations, 70% of PSA time in this category was broadcast during youth programs. However, for all remaining youth-oriented PSA's this relationship did not hold.

In terms of time distribution by PSA topic, hypothesis 6 predicted more general service time would be devoted to general topics than to social problems. Only 18% of total PSA time was devoted to social-problems PSA's (including drug abuse). The difference between proportions was significant ($z > 10$; $p < .001$).

Other significant interactive relationships are summarized in Table 5. Using topic as the dependent variable, significant relationships ($p < .001$) exist between PSA topic and use of data, fear appeals, message direction and celebrities. Although not indicated in Table 5, the auto/boat/home safety PSA's utilized the second largest proportion of fear appeal time (46%), after drug abuse messages.

DISCUSSION

In a content analysis of over 500 hours of television on-the-air time data from both broadcasters' logs and from actual observation it was found that PSA time accounts for only 2% of total air time while commercials account for an estimated 20% of air time. The data indicated the following significant relationships:

a) Hypothesis tests indicated that:

(H1) More PSA's are broadcast during class B, C, and D time periods than during prime time periods (class AA and A);

(H2) More time is devoted to PSA's during class B, C, and D periods than during the prime evening hours;

(H4) There is a significant relationship between program content and topic;

(H6) More PSA time is devoted to general topics than to social problems;

b) Support was not found for the expectations that,

(H3) A greater proportion of social problem PSA's will be found between programs than during programs;

(H5) There will be a direction relationship between direction of PSA and program content.

These additional relationships were indicated:

c) More PSA time is broadcast on weekdays than on weekend days;

d) 68% of all PSA time is presented between 7 AM and 6 PM;

e) Children's shows (30%), news and specials (18%), and talk shows (17%) account for the majority of PSA time broadcast;

f) In terms of topic themes represented by the PSA's, the categories accounting for the greatest proportion of PSA time were social problems (18%), medically-oriented PSA's (15%), solicitations (13%), jobs and education (11%) and parks and forests (11%);

g) Looking at social problems specifically, drug abuse messages accounted for 5% of the total PSA time, and venereal disease messages accounted for 10% of the total PSA time.

From the data it is evident that there exists considerable variability among presentation and message factors for various PSA topics. Some of this variability is, of course, a function of the engineer on duty at the television's film chain or video playback unit, or is attributable to the traffic department's scheduling idiosyncracies. Clearly these serve as PSA gatekeepers.

In our interviews with traffic schedulers, it was reported that PSA's were assigned generally according to their currency: newer and "fresher" PSA's were consistently given priority over older appeals (that had been scheduled for some time). Our observational analysis verified that during the early morning and

late evening periods, on occasion, the same PSA would be presented repeatedly, probably indicating an engineer unwilling to change films or tapes. Nevertheless, the amount of PSA's and air-time sampled is large enough that some reliable conclusions may be drawn.

This analysis chose to focus on social problem PSA's on the presumption, discussed previously, that some societal events constitute enough of a crisis to perhaps demand the extraordinary time commitment from broadcasters frequently exhibited during periods of natural disaster. For instance, President Nixon, in agreement with a number of leading drug abuse authorities, has repeatedly labeled drug abuse as a "national emergency," a problem "that afflicts both the body and soul" of America. Public health officials have pronounced that venereal disease in America has reached epidemic proportions in the early seventies. To what extent do broadcasters respond to such social "calamities?"

We identified a number of major themes we chose to label "social problems." Yet, as described in a previous examination of televised drug appeals (Hanneman and McEwen, in press) broadcasters apparently treat the social problem areas (like other topic areas) with a "business as usual" approach. We found that an average of only 2% of total time was devoted to each of the six social problem topics; far less than any other category except religious appeals.

The general pattern of PSA presentation, as shown in Tables 1 and 3, leads to the conclusion that commercial cost (as found during times of lower audience attendance; not during Class AA time) is a direct predictor of the amount of PSA time broadcast. Further evidence for a contention that PSA presentation is a matter of arbitrary availability dictated by time openings (rather than considerations of the best possible audience for the PSA content) is found in lack of significant relationship between direction of the appeal and program content. The fact that there was a significant relationship between program content and topic is perhaps misleading; closer examination of this distribution points to

the seeming inappropriateness of much of the PSA placement (e.g., drug abuse and personal health spots predominate during young children's shows).

It is informative to note (from Table 3) that the majority of PSA time is distributed across three program types: children's programs, news and specials and talk shows. Certainly none of these programs are typically broadcast during prime times, leading to less than optimal exposure for PSA's in them (see Table 5).

Clearly the personal health, jobs and education, crime prevention and perhaps some of the drug abuse PSA's are not most appropriately presented during these shows. Consider that the "children's" category emcompasses only cartoom shows and those shows oriented to youngsters (e.g., Mr. Wizard; Captain Kangaroo). Yet 30% of all PSA time is presented here. Another 35% of PSA time is presented during news and specials and during talk shows, programming content of typically low ratings. Only 1% of PSA time was presented during sports programs, probably reflecting the ease with which commercial time can be sold to sponsors of athletic events. Of course it is recognized that the decision to place public service ads is mainly a function of time, probably not program content.

The most surprising finding of the study was the large proportion of PSA time (13%) devoted to solicitation of funds. When disease solicitations are included in this category 21% of total PSA time is economically-oriented in a manner comparable to commercial advertising. The dimensions of how such appeals gain access to media time and provide service to the general public need further exploration. For example, most solicitations could not be considered comparable to, say, a factual PSA about drug abuse, or even about safe driving. Perhaps solicitation may ultimately be considered a category apart from purely factual PSA's.

Another comment should be added about <u>attention</u> to public service advertising. After viewing over 500 air hours coders repeatedly complained of the low techni-

cal quality of most PSA's.[5] The relatively poor production quality, graininess of the film, narration quality, acting quality and backround all served to cue the viewer that a PSA was beginning. The extent to which the quality of PSA's is significantly lower than other advertising and programming content may have a bearing on viewer attention and relative impact. At the least it reflects the neglect of broadcasters and producers of such messages.

Public Service Advertising and Drug Abuse. The data show that only 5% (37 minutes) of the total PSA time (747 minutes) broadcast during 530 hours of TV air-time were devoted to drug abuse. This figure is approximately equal to that found during the December, 1971 analysis. These data also indicated that most drug abuse appeals are presented during times of lowest audience attendance (class C and D times).

Not only does the content of drug abuse appeals reflect a "dump truck" approach to dissemination but the seemingly inappropriate dissemination by broadcasters (see Table 5) during class C and D times may leave them relatively ineffectual.

Such a de facto shotgun approach assumes that mere exposure — at any time, by any audience — results in message effect. Such an assumption ignores audience needs and attendance (e.g., do teenage drug abusers attend to television at 9 as well as the suitability of content (are drug abuse appeals about heroin use appropriately broadcast during children's cartoon shows?).

An extensive discussion regarding drug abuse message factors was presented previously (Hanneman and McEwen, in press). All the "bad" aspects of message content; reliance on celebrities (32%)[6]; apparently patronizing narration (e.g., "We wouldn't presume to tell you about drugs; you wouldn't listen anyway."); use of fear appeals, are still evident. Note that 51% of the total drug abuse PSA time centered on fear appeals. Such a proportion may not be the intent of the message creators, and is probably attributable to the lack of control over presentation.

As yet there are no data to show that drug abuse PSA's effectively countermand illicit drug use. Federal campaigns have generally disseminated messages without prior audience analysis. Some campaigns, as Patricial M. Wald and Annette Abrams point out in Dealing With Drug Abuse, assume that television can "unsell" drug use. However, mere exposure is obviously not equivalent to impact.

Clearly, alternative message strategies must be created. Alternative channels (e.g., the underground media) and alternative messages (straightforward and informative rather than propagandistic) could be utilized (Cf. Wald and Abrams, 1972; Hanneman, 1972). For instance, there apparently is wide-spread ignorance about drug abuse treatment and effects (Cf. Fort, 1972; Wald and Abrams, 1972). A greater message need appears to be for treatment information and guidance on how to cope with those on drugs (Hanneman with Pet, 1972). Drug abuse prevention agencies may be most effective in providing such factual information via the media, even in the form of paid PSA's, if need be, to optimize exposure.

The Role of Public Service Advertising. In our economic system broadcasters derive financial gain from the presentation of commercial messages promoting a variety of products. These products are often sold under various masks: sex appeal, prestige, popularity, comfort, etc. Such masks may represent, for some, a rise in expectations. That is, the media may create rising expectations in consumers for values and products previously unconsidered or expected. This need not be dysfunctional: Lerner (1958) has identified rising expectations as an important function of the media in developing countries; an aid to necessary economic growth.

Thus, if a population consumes certain products, a need for which may have been created by media-presented messages, a responsibility for the ultimate satisfaction and well-being of the consumer may therefore lie with the broadcasters. To some extent, the FCC and the FTC have argued this case in blocking cigarette

advertising and force the airing of anti-cigarette smoking PSA's, especially during prime time.

A similar kind of case might be made for auto safety. Automobiles are lavishly advertised on television; what is the obligation of the broadcaster in promulgating safe driving and seat belt PSA's? If a broadcaster advertises a product (and derives consequent profit) whose use results in potential danger, does he, or should he, have an obligation to point out those dangers? How different is such an obligation (e.g., car safety PSA's) when it is directly tied to advertising, compared to PSA's not directly related to an advertiser's appeals: for example, venereal disease, which certainly cannot be said to be related directly to the advertisement of any single product on television. Are such obligations qualitatively different in each case; that is, is a broadcaster obligated to present car safety PSA's because he derives profit from their advertising but not venereal disease PSA's?

The car safety PSA argument may also hold for drug abuse PSA's. Currently it is being debated in many circles whether there exists a relationship between (excessive) nonprescription drug use, televised drug advertising and drug abuse. Again, if a broadcaster derives profit from the advertisement of proprietatry drugs (which may or may not be related to norms fostering drug abuse) should broadcasters also be obligated to disseminate drug abuse PSA's?

Although many of these questions are of a socio-legal nature, their exploration and definition will certainly affect the nature of commercial broadcasting in the future. Clearly the evidence from this study indicates that on a large scale, broadcasters apparently are not meeting what may be an "implicit" obligation to their consumers, especially in the realm of social problems.

CONCLUSION AND IMPLICATIONS

From these data it can be seen that broadcaster's are seemingly not fulfilling their public service obligations in regard to informing the public about matters

of social concern. Whether or not broadcasters are obligated to disseminate such information as was previously mentioned, is another matter. Nevertheless, the media's role as a reporter of and its obligation to report societal events and as promulgator of information useful in establishing individual value criteria about matters of social concern is rooted in the tradition of the press (see, for instance, DeFleur, 1970).

There are a number of implications which bear on this study. For instance, longitudinal data about PSA dissemination would be useful in gauging message trends as an index of societal trends. What is needed are comparative data, however, from other media, which may be utilized to make cross-media comparisons. One might reasonably ask, for instance, whether public service advertising performs different functions depending upon the channel used: Is an Advertising Council Poster about fire prevention, in a subway, functionally similar to a fire prevention ad in a newspaper or a 30 second radio or television message? And, what functional differences accrue from a PSA versus a public service program?

Not only are cross media comparisons useful, but further data on PSA content utilization is needed to define the role of such messages. Perhaps it will be determined that PSA's are generally tuned out: Yet such need not be the case. We might ask, what kinds of message content would be most amenable to PSA dissemination?

Of course, an underlying problem still remains: How to encourage the professional communicator to promulgate PSA messages during times of maximum exposure, and even more importantly, to broadcast those PSA's to appropriate audiences. Also, producers of public service messages must be encouraged to upgrade the quality of their production efforts, to make televised PSA's at least equivalent in product to the best and most potent advertisement. Finally, when those questions have been resolved an analysis of access to public service

times and messages remains undefined. What about nonprofit organizations lacking funds to produce commercials? Frequently, as was indicated, PSA promulgation is merely dictated by what's available; if an organization doesn't provide a PSA to a broadcaster he simply won't get exposure. Equal access to air rights is defined for certain message areas (e.g., political broadcasting) by the Federal Communications Commission. However, no ruling is placed upon economy restrictions to access, probably a very real matter to many smaller nonprofit organizations.

FOOTNOTES

This study is one of a series of investigations into the impact and utilization of media drug abuse information (Project DAIR) being conducted at the University of Connecticut. Support, in part, was provided by the University of Connecticut Research Foundation. Computer time was made available through the resources of the University Computer Center. Dr. Hanneman is Chairman of the Communication Division of the Department of Speech at the University of Connecticut. Dr. McEwen is an assistant professor in the same department. Ms. Coyne is a research assistant and M.A. candidate. The authors gratefully acknowledge the help of Robert L. Atkyns, Guy Nutter, and Roger Wise.

1. Berlo, Lemert and Mertz (1970) cite qualification or perceived expertise as one of the major dimensions of source credibility.

2. These stations (WHNC; WTIC; WHNB; WJAR) were generous in permitting access to their logs. WCVB (Channel 5) in Boston also invited our coders; however, since they had just assumed operation of the station from WHDH (after a long license renewal challenge fight) their extensive public service commitment was considered unrepresentative. The remaining stations (WNAC; WDRI; WBZ; WTEV) refused access to their logs.

3. The instrument is available from the authors.

4. A full list of topics coded and a sponsor list are available from the authors also. By definition all messages concerning the Emergency Broadcasting System and Community Activities for the day were excluded from the analysis.

5. At lease one notable exception is the recent (Summer, 1972) drug abuse series (e.g., produced by the Bureau of Narcotics and Dangerous Drugs). These messages were of much higher quality.

6. Dr. Joel Fort, M.D. in "The Drug Explosion" (Playboy, September 1972, pp. 140) cites a San Mateo High School survey in which students were asked whom they would trust as the celebrity narrator of an anti-LSD film. The answer, "Nobody."

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TABLE 1

Distribution of PSA Messages and Time Shares by Day

DAY	PSA SHARE* (N = 1159)	TIME SHARE** (N = 747 minutes)
Saturday	11%	10%
Sunday	12	12
Monday	17	17
Tuesday	16	17
Wednesday	14	15
Thursday	15	15
Friday	15	14
	100%	100%

*In this and the following Chi square analyses of frequencies a one-sample test is used, except where indicated. $X^2 = 20.6$; df = 6; $p < .01$.

**$X^2 = 20.3$; df = 6; $p < .01$.

TABLE 2

Distribution of PSA Messages and Time Shares by Time Period.

CLASS	TIME	PSA SHARE* (N = 1159)	TIME SHARE** (N = 747)
D	Sign-on - 6:59 AM	5%	5%
B	7 - 8:59 and 4:30 - 5:59 PM	30	33
C	09:00 - 4:29 PM	38	38
A	6 - 7:29 PM	9	8
AA	7:30 - 10:59 PM	8	7
D	11:00 - sign-off PM	10	9
		100%	100%

*$X^2 = 662$; df = 5; $p < .001$.

**$X^2 = 638$; df = 5; $p < .001$.

TABLE 3

Proportion of PSA's Telecast During Various TV Show Categories

PROGRAM TYPE	PSA SHARE* (N = 713)	TIME SHARE** (N = 747 minutes)
Children's shows	21%	30%
News and Specials	20%	18%
Talk shows	19%	17%
Movies	11%	10%
Drama	9%	9%
Comedy	9%	8%
Game - Quiz Shows	3%	3%
Sports - Shows	3%	1%
Miscellaneous (e.g., women, variety, religious)	5%	4%
	100%	100%

*PSA's broadcast between shows (N = 446) not included in this analysis.

$X^2 = 259.6$; df = 8; $p < .001$.

**Total PSA time by show (747 minutes) calculated only for PSA's (713 out of 1159) shown during a program. Thus these proportions do not reflect total PSA time.

$X^2 = 285$; df = 8; $p < .001$.

TABLE 4

Distribution of Public Service Advertisments by PSA Topic Share and Time Share

TOPIC	TOPIC SHARE* (N = 844)	PSA TIME SHARE** (N = 747 minutes)
Social Problems	(18%)	(18%)
General (six topics)	13%	13%
Drug Abuse	5	5
Medical	(15)	(15)
Disease Detection and Solicitation	8	8
Personal Health	7	7
Solicitation (non-medical)	(15)	(13)
General	11	11
Emergency	4	2
Jobs and Education	11	11
Parks and Forests	9	10
Youth Organizations	8	8
Auto/Boat/Home Safety	6	5
Government Information	5	5
Crime Prevention	4	5
Government Volunteers	4	5
Community Organizations	4	4
Religion	1	1
	100%	100%

*Topic share distributions based on 9 - channel observed analysis.
$X^2 = 220$; df = 14; $p < .001$.

**Time share based log data: $X^2 = 106.2$; df = 14; $p < .001$.

TABLE 5

Summary of Message Factor Relationships for Selected PSA Topics by Time on Air

TOPIC	PSA SHARE	TIME SHARE*	WHEN SHOWN**	DATA USED***	FEAR APPEAL	CELEBRITY	DIRECTION
Social Problems	13%	13%	news, specials, talk shows	32%	32%	18%	General 80% Parents 15
Drug Abuse	5	5	children talk/ news	32	51	40	General 50 Youth 37
Solicitation (General and emergency)	15	13	news, specials, talk shows	15	20	9	General 90
Disease Detection/ Solicitation	8	8	talk shows, comedy, children movies	23	28	37	General 81 Parents 14
Personal Health	7	7	children	9	24	10	General 46 Parents 37
Jobs and Education	11	11	children, comedy news/talk	11	16	9	General 54 Youth 30
Parks and Forests	9	10	children, movies	20	33	4	General 75 Parents 20
Youth Organizations	8	8	children	20	5	10	Youth 45 General 43
Crime Prevention	4	5	news, specials, children	31	32	17	General 70 Parents 22

*N = 747 minutes; for all other columns, N = 844 observations.

**Programs listed represent modal types, presented in descending order of proportionate PSA time share. Where only one category is listed, one-third or more of the time was in that one category, the rest evenly distributed among all shows.

***Figures in this and following columns refer to proportion of that PSA category's time share: For example, 32% of the total drug abuse PSA's on-the-air-time utilized data in their appeal. Thus, 32% of the 97 minutes of drug abuse time is 31 minutes of air time (in 7 days) during which such a message appeal was made for drug abuse.